

APPENDIX
Amended Claims (non-marked up version)

1. (currently amended) A system for the cross-correlation of data, comprising:
a plurality n of computers PC_i , n being a real number which is equal to or greater than 2,
and i being an integer from 0 to $n-1$;
wherein said plurality n of computers PC_i are communicably coupled via a connector
with a switch;
each of said plurality n of computers PC_i further including a storage device configured
for storing data X_i ;
data X_i being divisible into n partial data units $X_i(j)$, j being an integer from 0 to $n-1$;
data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;
a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of
partial data $X_i(k)$;
wherein each computer PC_i of said plurality n is configured to exchange a partial data
unit with a partner computer chosen from said plurality n of computers; and
wherein each computer PC_i of said plurality n is configured to exchange additional
partial data units with a partner computer chosen from said plurality n of computers.
2. (currently amended) The system of claim 1, wherein each computer PC_i of said
plurality n is configured to exchange with a partner computer $n-1$ partial data units when n is
even, and n partial data units when n is odd.
3. (currently amended) A system for the cross-correlation of data, comprising:
a plurality n of computers PC_i , n being a real number which is equal to or greater than 2,
and i being an integer from 0 to $n-1$;
wherein said plurality n of computers PC_i are communicably coupled via a connector
configured for full duplex transmission and configured for a switching function;
each of said plurality n of computers PC_i further including a storage device configured
for storing data X_i ;

data X_i being divisible into n partial data units $X_i(j)$, j being an integer from 0 to $n-1$;
data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;
a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

wherein each computer PC_i of said plurality n is configured to exchange $n-1$ partial data units with a partner computer; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

4. (currently amended) A system for the cross-correlation of data, comprising:
a plurality n of computers PC_i , n being a real number which is equal to or greater than 2, and i being an integer from 0 to $n-1$;

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i ;

data X_i being divisible into n partial data units $X_i(m)$, m being an integer from 0 to $n-1$;
data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;
a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers; and

wherein each computer PC_i of said plurality n is configured to exchange additional partial data units with a partner computer chosen from said plurality n of computers.

5. (currently amended) The system of claim 4, comprising an α turn, α being an integer of 0 and more, wherein the α turn includes partial data units, numbering from $n \times \alpha$ to $(n \times \alpha + n - 1)$, and comprising partial data unit $X_i(k + n \times \alpha)$, the partial data unit $X_i(k + n \times \alpha)$ being located on each computer PC_i , wherein the computer PC_k is configured for the cross correlation processing

of partial data unit $X_i(k + n \times \alpha)$.

6. (currently amended) A system according to claims 4 or 5,

wherein each computer PC_i of said plurality n is configured to exchange $n-1$ partial data units with a partner computer when n is an even number, and n partial data units with a partner computer when n is an odd number; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

7. (currently amended) A system for the cross-correlation of data, comprising:

a plurality n of computers PC_i , n being a real number which is equal to or greater than 2, and i being an integer from 0 to $n-1$;

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i ;

data X_i being divisible into n partial data units $X_i(m)$, m being an integer from 0 to $n-1$;

data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;

a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers;

wherein each computer PC_i of said plurality n is configured to exchange $n-1$ partial data units with a partner computer; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

8. (currently amended) A system as in any one of the preceding claims, in which the computers PC_i of said plurality n are general purpose computers.

9. (currently amended) A system as in any one of the preceding claims, comprising a network medium configured for full duplex communications.
10. (currently amended) A system as in any one of the preceding claims, in which said data are time series data recorded from radio telescopes.
11. (currently amended) A system for the cross-correlation of data, comprising:
a plurality n of computers PC_i , n being a real number which is equal to greater than 2,
and i being an integer from 0 to $n-1$;
wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;
each of said plurality n of computers PC_i further including a storage device configured for storing data X_i ;
data X_i being divisible into n partial data units $X_i(j)$, j being an integer from 0 to $n-1$;
data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;
a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$; and
wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers.
12. (currently amended) A system for the cross-correlation of data, comprising:
a plurality n of computers PC_i , n being a real number which is equal to or greater than 2,
and i being an integer from 0 to $n-1$;
wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;
each of said plurality n of computers PC_i further including a storage device configured for storing data X_i ;
data X_i being divisible into n partial data units $X_i(m)$, m being an integer from 0 to $n-1$;

data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;
a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers; and

13. (currently amended) A system for the cross-correlation of data, comprising:

a plurality n of computers PC_i , n being a real number which is equal to or greater than 2, and i being an integer from 0 to $n-1$;

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i ;

data X_i being divisible into n partial data units $X_i(j)$, j being an integer from 0 to $n-1$;

data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;

a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers; and

wherein each computer PC_i of said plurality n is configured to exchange $n-1$ partial data units with a partner computer; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

14. (currently amended) A system for the cross-correlation of data, comprising:

a plurality n of computers PC_i , n being a real number which is equal to or greater than 2, and i being an integer from 0 to $n-1$;

wherein said plurality n of computers PC_i are communicably coupled via a connector with a switch;

each of said plurality n of computers PC_i further including a storage device configured for storing data X_i ;

data X_i being divisible into n partial data units $X_i(j)$, j being an integer from 0 to $n-1$;

data X_i being divisible into n partial data units $X_i(k)$, k being an integer from 0 to $n-1$;

a computer PC_k , wherein computer PC_k is configured for cross-correlation processing of partial data $X_i(k)$;

wherein each computer PC_i of said plurality n is configured to exchange a partial data unit with a partner computer chosen from said plurality n of computers;

wherein each computer PC_i of said plurality n is configured to exchange $n-1$ partial data units with a partner computer; and

wherein each computer PC_i of said plurality is configured to exchange partial data units with each partner computer once.

15. (currently amended) A system as in one of claims 11-14, comprising a network medium configured for full duplex communications.